

### REMARKS

Applicant has reviewed and considered the Office Action mailed on April 3, 2003, and the references cited therewith.

Claims 1, 8, 13, 16, 29 and 30 have been amended. Claims 6 and 28 have been cancelled. Claims 1-5, 7-27, 29 and 30 are now pending in this application.

#### *§103 Rejection of the Claims*

Claims 1-4, 6-20, 22 and 24-30 were rejected under 35 USC § 103(a) as being unpatentable over Lambrecht (US 6,259,792) in view of Denenberg (US 5,375,174). This rejection is respectfully traversed.

Claims 1, 8, 13 and 16, as amended, describe "a built-in microphone of said personal computer". The microphone of the Lambrecht device does not appear to be built-in as recited in claim 28. While microphone 108 is described as an element of the computer system, it appears to be merely a microphone jack, since the microphone may be located on a headset. The examiner's attention is directed to col. 3, lines 48-52 of Lambrecht: "Microphone 108 is a conventional microphone that converts sound to electrical audio signals. In one embodiment, the microphone is physically located with the speaker or headphone. Speaker 110 is conventional speaker or headphone for converting electrical audio signals to audible sound."

Claims 1, 8, 13 and 16, as amended also recite a standard headphone compatible audio output connection. As indicated above, Lambrecht does not describe such a connection. It merely indicates that speaker 110 is a conventional speaker or a headphone. Since at least two elements are now shown or suggested by the references, the rejection should be withdrawn.

The rejections should also be withdrawn at least because such references are not properly combinable. Lambrecht effectively indicates that it would not work on transient noise, such as a siren because it does not continuously sample ambient noise. Denenberg is specifically designed to work synchronously in an emergency vehicle with a siren as indicated in the title: "Remote Siren Headset". Thus, there is no motivation to combine the references, and the rejection should be withdrawn.

A factor cutting against a finding of motivation to combine or modify the prior art is

when the prior art teaches away from the claimed combination. A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path the applicant took. *In re Gurley*, 27 F.3d 551, 31 USPQ 2d 1130, 1131 (Fed. Cir. 1994); *United States v. Adams*, 383 U.S. 39, 52, 148 USPQ 479, 484 (1966); *In re Sponnoble*, 405 F.2d 578, 587, 160 USPQ 237, 244 (C.C.P.A. 1969); *In re Caldwell*, 319 F.2d 254, 256, 138 USPQ 243, 245 (C.C.P.A. 1963).

There is no suggestion to combine the references, and in fact, there is teaching leading one of average skill in the art away from such a combination. Denenberg is directed toward providing noise cancellation to a wireless headset. In Denenberg, the microphones 34 and 35 are located in the headset 30, and a remote controller 38 is used to process the noise signals and provide the cancellation signal using a **synchronous** controller. Lambrecht utilizes a sample signal, so that “the noise cancellation function requires relatively little processing power and is accomplished without the need for special purpose hardware.” Abstract. Thus, Lambrecht is directed to a different problem, that of providing noise cancellation while reducing “the processing requirements of the host processor.” Col. 2, lines 26 – 27. Lambrecht further teaches away in Col. 6, lines 49-59:

“The above described systems are effective for canceling relatively constant statistically predictable noise. For example, airplane noise is relatively constant and has a statistically predictable frequency spectrum. Because the noise is relatively constant and statistically predictable, a cancellation signal can be calculated **without continuously sampling the noise environment**. If the characteristics of the noise change at a relatively slow rate and remain statistically predictable, the above-described systems can effectively cancel noise by periodically updating the cancellation signal”

Lambrecht effectively indicates that it would not work on transient noise, such as a siren, as is indicated in the title of Denenberg. Lambrecht indicates that continuous sampling is not required, whereas Denenberg uses a synchronous controller to compensate for transient noise such as the siren. Thus, there is no suggestion to combine the references, and the rejection should be withdrawn.

The Office Action must provide specific, objective evidence of record for a finding of a

suggestion or motivation to combine reference teachings and must explain the reasoning by which the evidence is deemed to support such a finding. *In re Sang Su Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002). The Office Action stated “it would obvious to one of ordinary skill in the art at the time invention was made to combine the teaching of Lambrecht and Denenberg to achieve an audio entertainment system or a communications system can be combined with a noise control system and the system of this teaching to provide a quieter listening environment and better sound fidelity” which is a mere conclusory statement of subjective belief. There is no identification of a suggestion in the art for such a combination. Applicant respectfully submits that the Office Action has not provided objective evidence for a suggestion or motivation to combine the references.

In the Advisory Action mailed July 7, 2003, the Examiner indicates that “Denenberg teaches using a DSP to mix a noise cancellation signal with an audio signal to produce a noise corrected audio signal. It is this concept of Denenberg that is applied to Lambrecht.” Applicants assert that Lambrecht teaches away from using the teaching of Denenberg, and thus, one skilled in the art would not find a suggestion to combine them. Lambrecht clearly desires noise cancellation that requires less processing power. Denenberg uses lots of processing power by using a DSP. Again, there is no suggestion identified by the Examiner, other than that combining them would produce better sound. Even this suggestion is based on the Examiner’s subjective belief, and not from the prior art.

Claim 2-7, 9-12, 14-15, 17-23 and 30 each depend from a claim which has been distinguished above, and these claims are believed allowable for at least the same reasons as the claims from which they depend.

Claims 24-27 specifically recite: “a profile for compensating for keyboard key clicks detected by the microphone”. The Examiner states that Lambrecht has “a profile for compensating for keyboard key clicks detected inherently by the microphone”. There is no teaching in Lambrecht to such a profile, and such teaching cannot be inherent. The Office Action has not established a *prima facie* case of inherency because, as recited in MPEP § 2112, “In relying upon the theory of inherency, the examiner must provide basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent

characteristic necessarily flows from the teachings of the applied prior art,” citing Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

The Office Action only argued that the profile was inherent because the microphone detects key clicks. Thus, the Office Action does not even assert that the allegedly inherent characteristic is necessary, let alone provide a basis in fact and/or technical reasoning. Applicant respectfully submits that the use of a profile for key clicks does not necessarily flow from the teaching of Lambrecht because the noise caused by key clicks could be cancelled real time, without the use of a profile. Thus, using a profile is not something that necessarily flows from the teachings of Lambrecht.

In fact, Lambrecht teaches away in Col. 6, lines 49-59:

“The above described systems are effective for canceling relatively constant statistically predictable noise. For example, airplane noise is relatively constant and has a statistically predictable frequency spectrum. Because the noise is relatively constant and statistically predictable, a cancellation signal can be calculated without continuously sampling the noise environment. If the characteristics of the noise change at a relatively slow rate and remain statistically predictable, the above-described systems can effectively cancel noise by periodically updating the cancellation signal”

Lambrecht effectively indicates that it would not work on transient noise, such as keyboard sounds. Instead, it works on constant noise, such as airplane noise. Thus, given the teaching away, and the lack of teaching of the profile element, the rejection should be withdrawn.

Claim 5 was rejected under 35 USC § 103(a) as being unpatentable over Lambrecht (US 6,259,792) and Denenberg (US 5,375,174) as applied to claim 1, and further in view of Eatwell (US 5,828,768). Claim 5 depends from claim 1 and is believed to distinguish the references for at least the same reason since Eatwell is not cited as providing the motivation to combine Lambrecht and Denenberg.

Claims 21, 23 were rejected under 35 USC § 103(a) as being unpatentable over Lambrecht (US 6,259,792) and Denenberg (US 5,375,174) as applied to claims 1, 8, and furthering view of Markow (US 6,304,434). Claims 21 and 23 depend from claim 1 and are believed to distinguish the references for at least the same reason since Markow is not cited as providing the motivation to combine Lambrecht and Denenberg.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney 612-373-6972 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-0439.


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**CERTIFICATE UNDER 37 CFR 1.8:** The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner of Patents, P.O.Box 1450, Alexandria, VA 22313-1450, on this 14 day of August, 2003

**Candis B. Buending**

Name

Signature

